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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,175	02/27/2002	Barry Lynn Butler		1719

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Dr. Barry Lynn Butler
980 Santa Estella
Solana Beach, CA 92075

EXAMINER

CLARKE, SARA SACHIE

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 03/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,175

Applicant(s)

BUTLER, BARRY LYNN

Examiner

Sara Clarke

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 5-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

In Applicant's response filed December 20, 2003, Applicant provided both paper and a duplicate CD version (in Microsoft Word) of the amendment. In accordance with MPEP 719.01(a), the CD version has been destroyed. Applicant is advised not to send any more CDs.

Drawings

The drawings were received on December 20, 2003. These drawings are not acceptable because they contain new matter. By way of example, the valves in Fig. 1 were not disclosed in the original specification.

Since the amended drawings are not acceptable, the objections to the drawings in the previous office action have been maintained.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

Replacement Drawing Sheets

Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments, or remarks, section of the amendment. Any replacement drawing sheet must be identified in the top margin as "Replacement Sheet" and include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin.

Annotated Drawing Sheets

A marked-up copy of any amended drawing figure, including annotations in red indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheets must be clearly labeled as "Annotated Marked-up Drawings" and accompany the replacement sheets.

Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

The drawings are objected to because different views, on pages 2 and 3 of the drawing sheets, have not been labeled in consecutive Arabic numerals. See 37 CFR 1.84(u).

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. See 37 CFR 1.85(a).

Specification

The substitute specification filed December 20, 2003, has not been entered because it does not conform to 37 CFR 1.125(b) because it was not accompanied by a statement that the substitute specification includes no new matter. Since the substitute specification has not been entered, the objections with respect to the specification from the previous office action have been maintained.

MPEP 2163.06 describes "new matter" as follows: "If an applicant amends or

attempts to amend the abstract, specification or drawings of an application, an issue of new matter will arise if the content of the amendment is not described in the application as filed. Stated another way, information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter."

The amendment filed December 20, 2003, is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: By way of example, the diameter of the fluid carrying tubes being 3/8 inch, the clam shell split pipe external covering, and the addition of the fill/drain valves are not supported by the disclosure as filed.

Applicant is advised that in order to avoid the addition of new matter, he should not use amendment practice to rewrite his specification. Of course, he can make grammar corrections. However, all other amendments must conform to the drawings/specification as filed. Any changes should be made carefully to avoid the addition of prohibited new matter.

The disclosure is objected to because it is replete with informalities. For example: On page 3, line 12, "buy" should be "by." On page 3, line 18, "loosing" should be "losing." On page 5, line 8 from the bottom, "who's" should be "whose." Appropriate correction of **all** such informalities is required.

The abstract of the disclosure is objected to because it exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

Claim Objections

It was unnecessary for Applicant to provide a clean version of the claims. In this office action, the claims listed on pages 32-34 of the amendment are referenced.

Claims 5-8 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claims 5-8 have not been further treated on the merits.

Claim 3 is objected to because of the following informalities: In claim 3, line 3, "systems" should be "system's." Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

The original disclosure provides no support for the double-walled heat exchanger, which is adaptable to existing hot water tanks as recited in claim 1. The original disclosure provides no support for the recitation of a clamp-on "clam-shell" split pipe external covering, as recited in claim 4.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1- 4 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

In claim 1, line 13, is the "existing hot water tank" the same element as the "domestic hot water tank" on line 2?

In claim 2, line 6, there is no antecedent basis for "the fluid loop."

In claim 3, line 7, there is no antecedent basis for "the fluid loop and hot water tank."

In claim 4, line 2, there is no antecedent basis for "the solar collector" and "the hot water tank."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Goto et al. (JP 59-93149 A).

Goto et al. discloses the invention as claimed including a boiling gas/liquid separator 9 and a filler tube 10 to return the condensed water to the fluid loop.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Embree (US 4269167) in view of Scharfman (US 4043317), Sigworth, Jr. (US 4413615), and Zinn (US 4399319).

Embree discloses the invention substantially as claimed including a pressurization system (col. 5, lines 54 - col. 6, line 2), said pressurization system prevents boiling and is thus an overheat protection system as discussed in the section of the specification listed above, means to prevent damage from freezing by drainage (col. 2, lines 54-56), and means to deliver heat (return line 14).

Embree does not disclose a fluid radiator/overflow/recovery apparatus, an antifreeze heat transfer fluid, a flexible umbilical, and a double walled internal heat exchanger.

Scharfman discloses a solar panel having an overheat protection system including dampers 28a,30a to permit cool air circulation to maintain the temperature of the collector.

Sigworth, Jr. discloses a solar energy system and teaches the use of an antifreeze heat transfer fluid (see the abstract) and a double walled internal heat exchanger 18 for the purpose of preventing freezing of the heat transfer fluid and preventing leaking of the heat transfer fluid. See column 5, lines 28-49.

Zinn discloses an umbilical assembly, which carries and insulates (outer jacket 14 is insulative) a heat transfer fluid and includes conductors 13,13A for making

electrical circuits.

Thus, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to provide the solar energy system of Embree with the an overheat protection system including dampers as taught by Scharfman to permit cool air circulation to maintain the temperature of the collector, an antifreeze heat transfer fluid and a double walled internal heat exchanger as taught by Sigworth, Jr. for the purpose of preventing freezing of the heat transfer fluid and preventing leaking of the heat transfer fluid, and the umbilical assembly taught by Zinn for the purpose of insulating the heat transfer fluid and carrying conductors.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zinn (US 4399319) in view of Holland et al. (US 5310594).

Zinn discloses the invention substantially as claimed including an umbilical assembly, which carries and insulates (outer jacket 14 is insulative) a heat transfer fluid and includes conductors 13,13A for making electrical circuits. Zinn does not disclose a clamp-on "clam-shell" split pipe external covering.

Holland et al. discloses an insulated piping and is thus analogous prior art. Holland et al. discloses a clamp-on "clam-shell" split pipe external covering (see Fig. 14) permitting simplified installation on a pipe.

Thus, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to provide the piping of Zinn with the clamp-on "clam-shell" split pipe external covering as taught by Holland et al. to permit simplified installation of insulation about the piping.

Allowable Subject Matter

Claim 3 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Response to Arguments

With respect to the Goto et al. reference, it appears that applicant's arguments only relate this reference as it applies to claim 1. Claim 1, as amended was rejected over a combination of references. The other references applied teach the features, which Goto et al. does not.

Embree was one of those references applied in combination with Goto et al. against claim 1. Applicant argues, with respect to Embree, that it does not show all of the features of his system. Once again, it is noted that claim 1, as amended was rejected over a combination of references. The other references applied teach the features, which Embree does not.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that the Zinn reference fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (e.g., polymer separators) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.

1993).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Clarke whose telephone number is (703)305-9177. The examiner can normally be reached on Thurs. and Fri., 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached at (703)308-1935. The fax phone number for the organization where this application is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sara Clarke
Primary Examiner
Art Unit 3749



27 February 2004